Sound BlasterAxx AXX 200 Teardown

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Written By: Ralph Riley



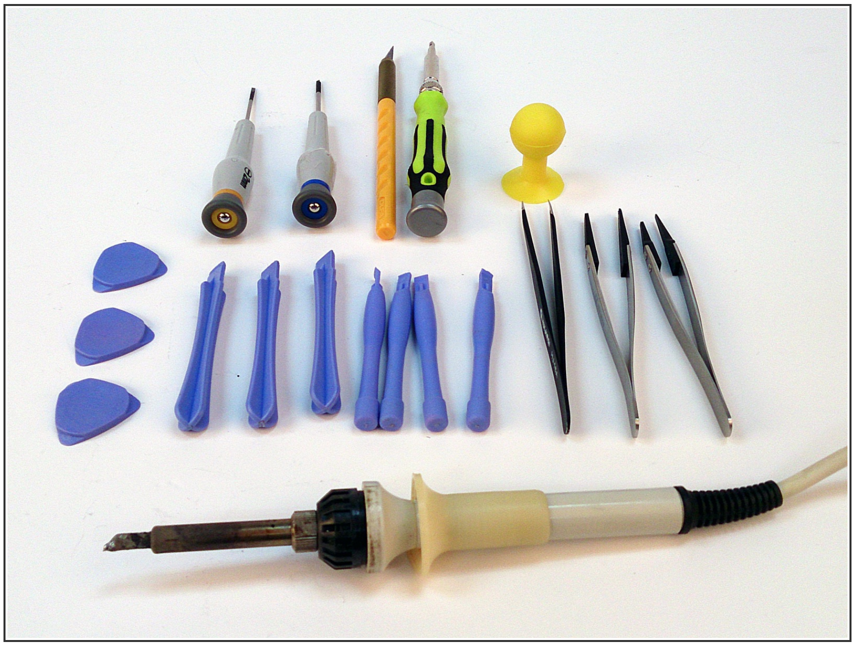
INTRODUCTION

The Sound BlasterAxx AXX 200 is touted as an intelligent wireless sound system – it's supposed to be chock full of techy stuff and features that sets it apart from other wireless speakers.

TOOLS:

- Phillips #0 Screwdriver (1)
- Phillips #2 Screwdriver (1)
- 2.5 mm Flathead Screwdriver (1)
- Precision Utility Knife (1)
- Suction Handle (1)
- iFixit Opening Picks set of 6 (1)
- iFixit Opening Tools (1)
- Tweezers (1)
- Soldering Station (1)
- Heat Gun (1)
- Mild Solvent (1)

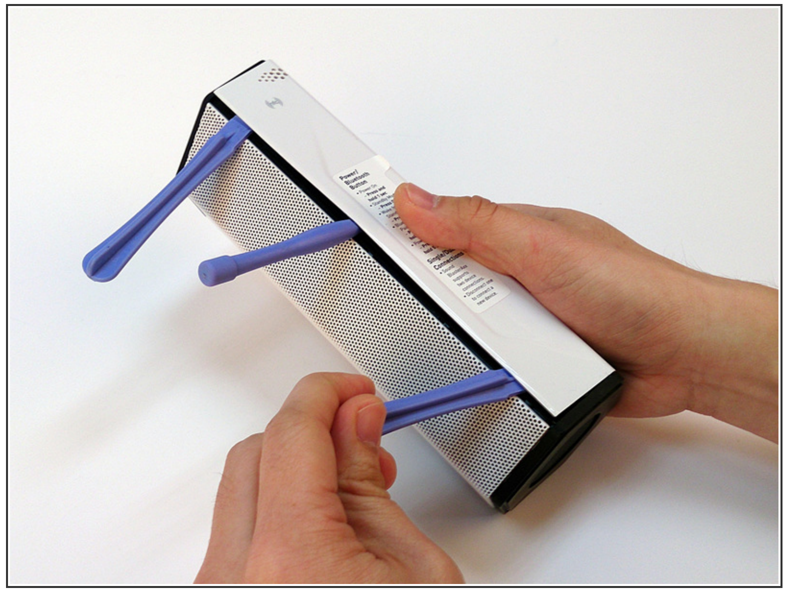
Step 1 — Sound BlasterAxx AXX 200 Teardown



- Here are the tools you would need to start the teardown:
- Phillips #0 and #2 Screwdriver
- Flathead 3/32" (2.5mm) Screwdriver
- Hobby knife
- Small baller suction cup
- Opening picks
- Plastic opening tools, Flat-head tweezers
- Soldering iron, Heat gun or hair dryer and Flux solvent

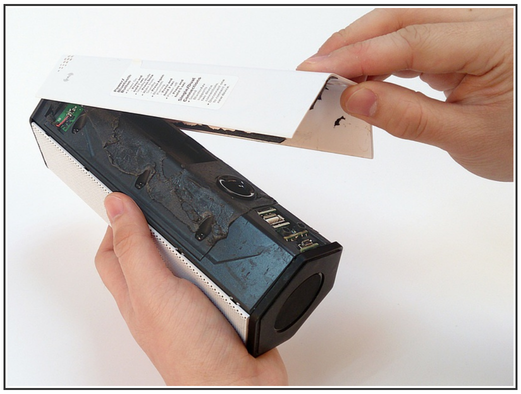
Step 2 — Opening back housing

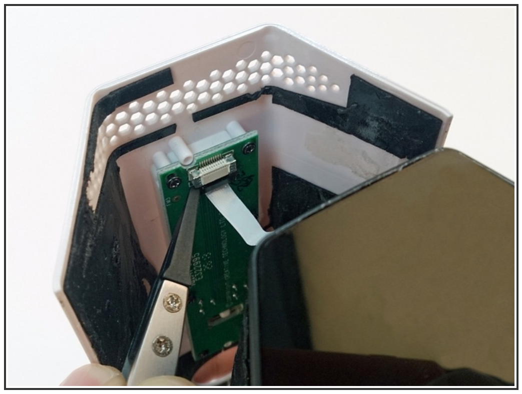


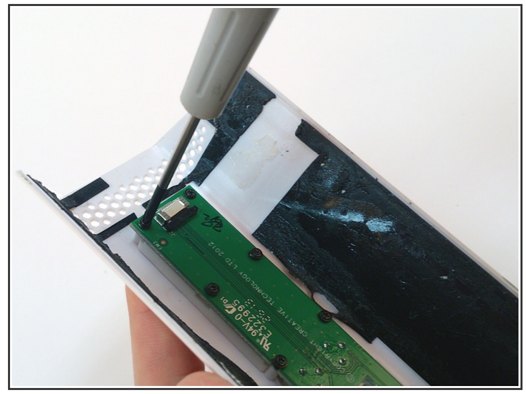


- The AXX 200 is well put together. And by that, I mean the plastic housing on the back is held in place by adhesive. Lots and lots of adhesive.
- Start by using opening picks to remove the adhesive holding the back casing. A hair dryer or heat gun would help.
- Plastic opening tools are also brought into the picture to get past the sticky adhesive and to pry open the back casing.
- A spudger with a longer tip would be more helpful – or a plastic ruler could work as well.

Step 3 — Detaching back housing

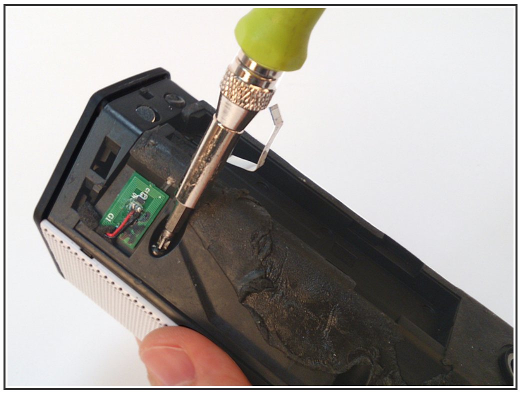


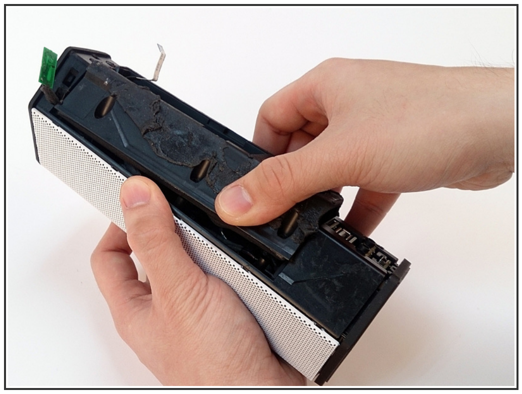


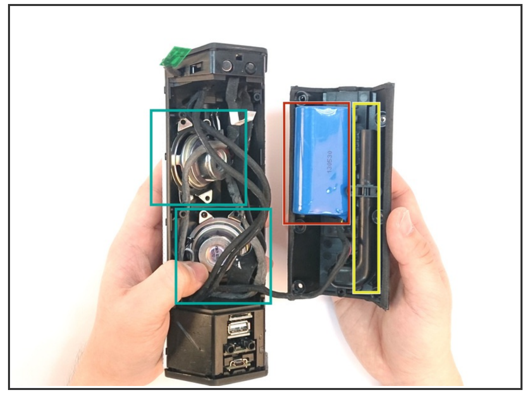


- After getting through the adhesive, lift the back casing open as pictured.
  - Warning: CAREFUL! A flex connector holds the buttons on the back casing to the unit, so don't be too eager pulling the back casing away.
- Disconnect the flex connector by simply pulling it downwards with a pair of flat-head tweezers
- Then, remove the button PCB panel with a Phillips #0 screwdriver.

Step 4 — Opening the chamber







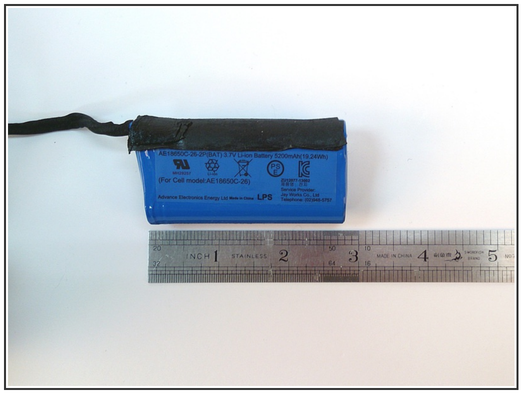
- Remove the audio chamber by unscrewing the 6 screws with a Phillips #2 screwdriver.

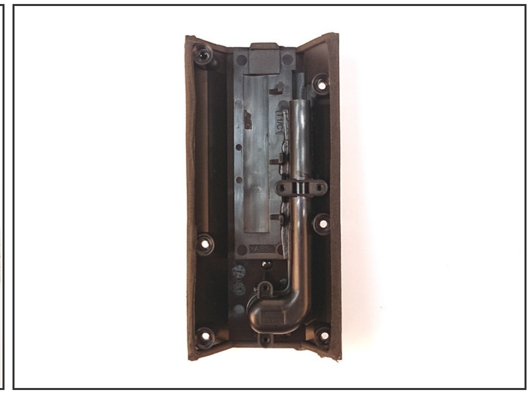
  ⚠ Warning: lift up the delicate NFC sensor with tweezers before opening the chamber. You will have to peel off any excess adhesive to reveal the screw holes.

- It’s a sizeable audio chamber for such a small speaker. Upon opening it up, you will easily identify:
- The friggin’ big battery
- Port tube for boosted bass
- Drivers x 2
- You’ll also notice that all the cables (and there are a lot of them) are shielded with foam to prevent rattling.

Step 5 — Battery and port tube

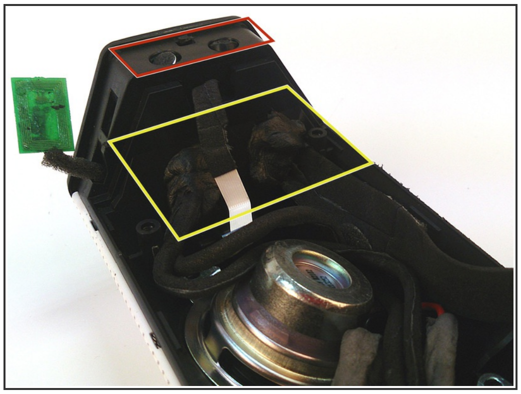
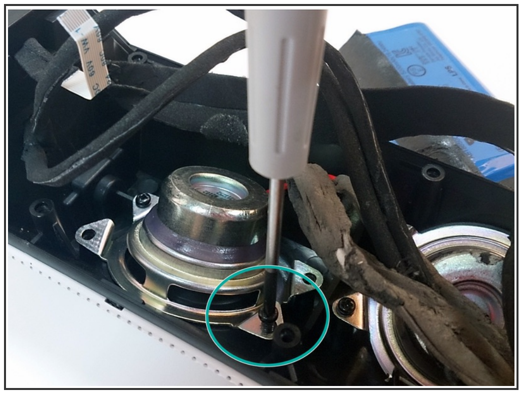
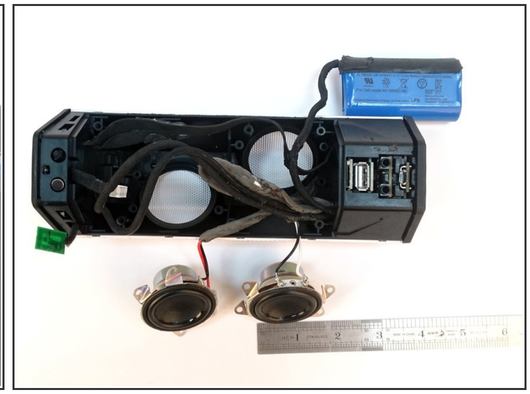






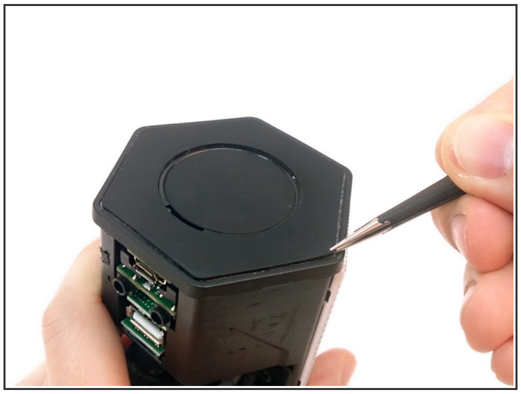
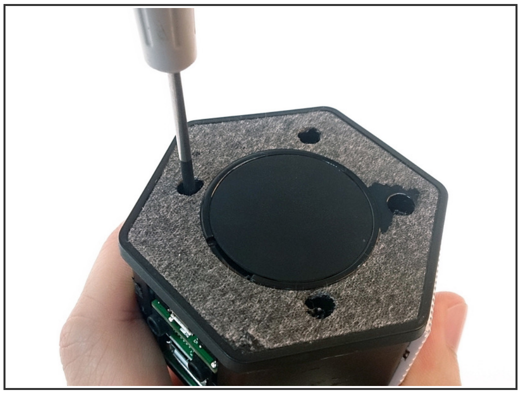
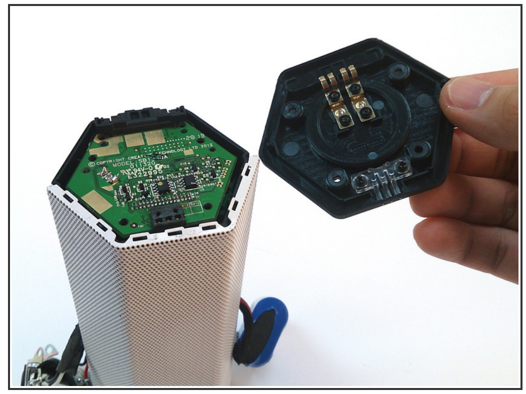
- Great Odin's raven! That's a big battery!
- It's a whopping 3.7V Li-ion battery with 5200mAh, and it's used to power the device and charge your phone.
- The built-in port tube enhances bass.

Step 6 — Taking out the drivers

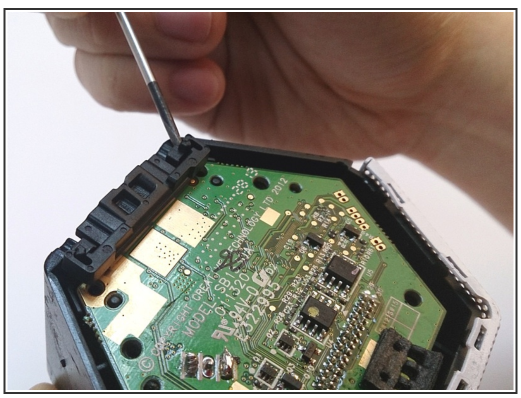
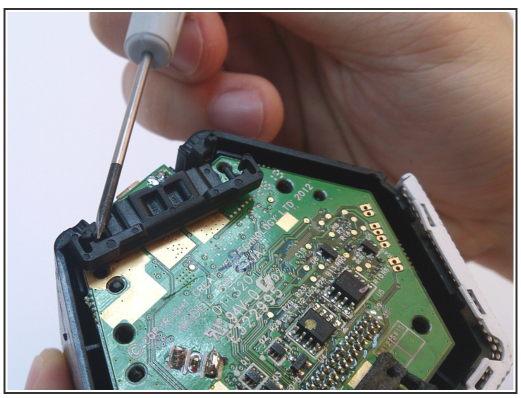
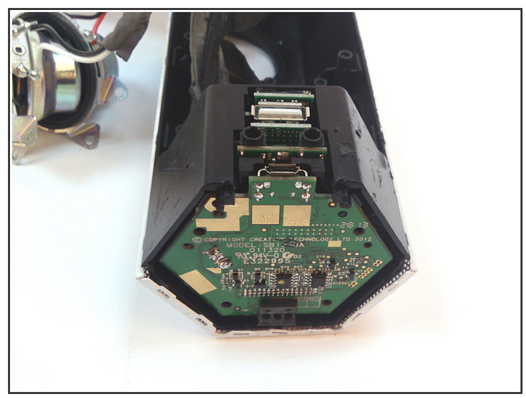
- Using tweezers and screwdrivers, carefully remove the black tack (or adhesive putty) used to keep the cables in place at both ends of the chamber.
  - Sound Blaster really hasn't stinged on the putty. There is a lot of it. It makes for an airtight enclosure, but the amount of putty really is quite overwhelming. Have I mentioned there's a lot of putty? Oh okay, good.
- Two microphones can be spotted at the top of the audio chamber, but there's no way to access them from here.
- Once the cables are loosened, remove the drivers with a Phillips screwdriver.
  - The unique positioning of the drivers allows for a wider sound spectrum. Both drivers measure about 1.6 inches (or 40 mm) each.

Step 7 — Opening bottom chamber

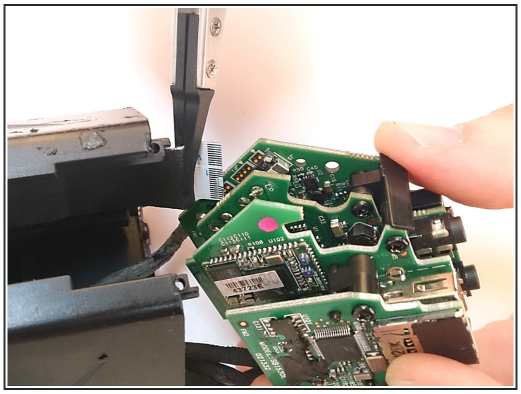
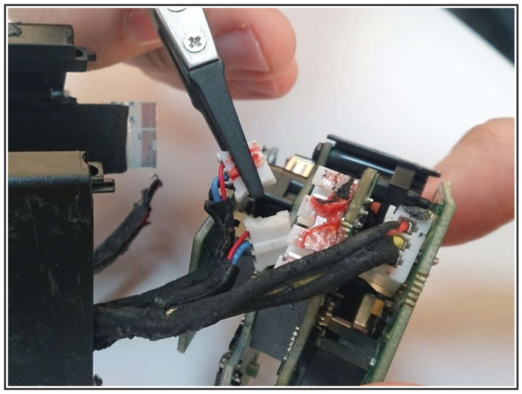
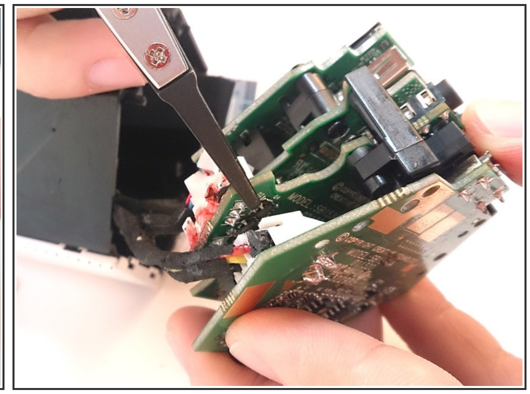
- The next step is to open the bottom chamber.
- Peel open the rubber base to reveal more screw holes.
- Unscrew the base cap with a Phillips screwdriver.
  - ⚠ Be careful not to expose the metal contact on the base to moisture.

Step 8 — Removing PCB stack

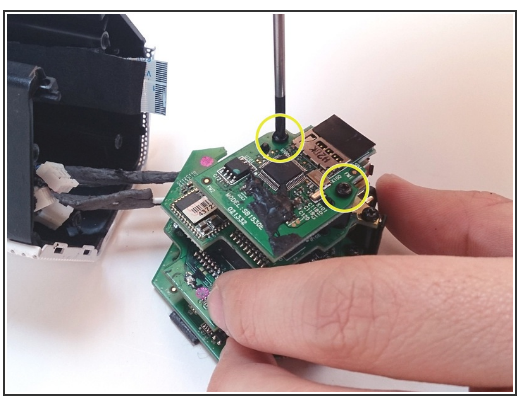
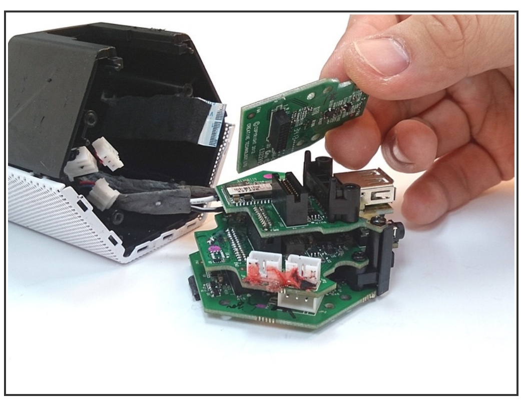
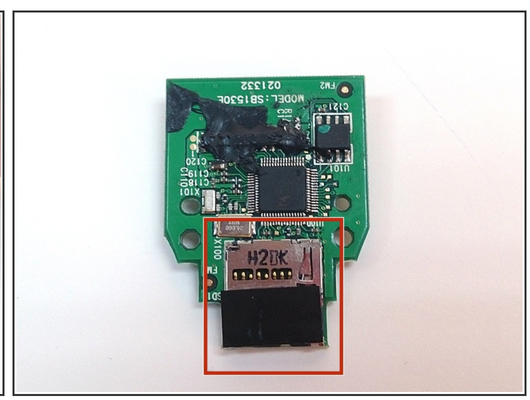
- Use a flathead 3/32" screwdriver to carefully unhook and release the catch holding the PCB.
  - ⚠ Be gentle so you don’t break the plastic catch.
- The various ports at the bottom of the AXX 200 seem to be separated into different PCBs.

Step 9 — Detaching PCB stack

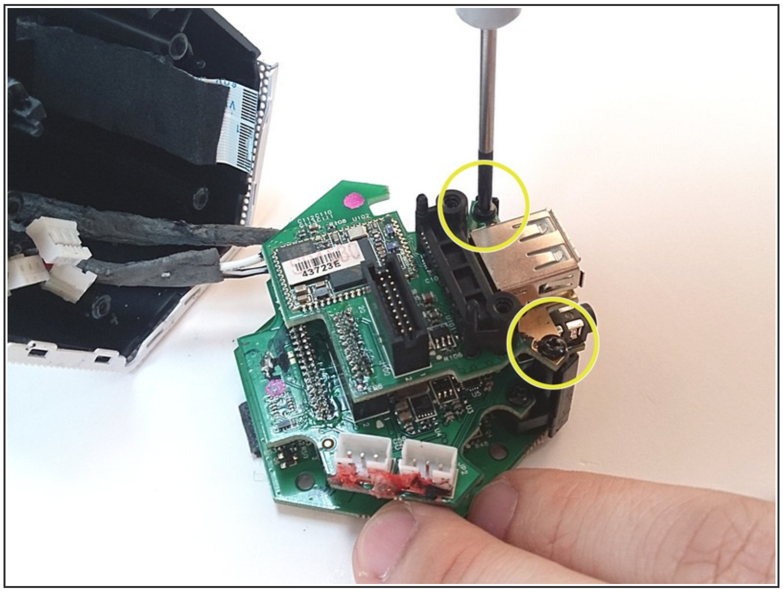
- There are a total of four PCBs neatly stacked up to fit in the small AXX 200 chamber. It minimizes space. Saved space = bigger audio chamber = better audio.
- To take out the stack of PCBs, first, disconnect the flex connector with tweezers.
- After that, disconnect the two connectors. These are probably connected to the microphones at the top.
- Lastly, disconnect the final connector that is linked to the battery from the bottom PCB.

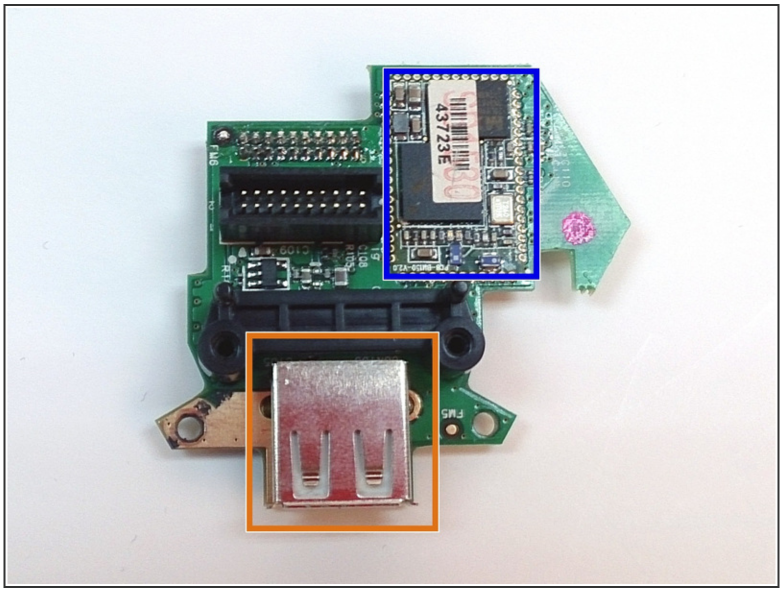
Step 10 — Separating PCB stack: microSD card slot

- The first PCB houses the microSD card slot, which allows for MP3 playback and voice recording.
- First, remove the top two Phillips screws to detach the microSD card slot PCB.
- Gently disconnect the microSD card slot PCB from the stack.
  - MicroSD card slot

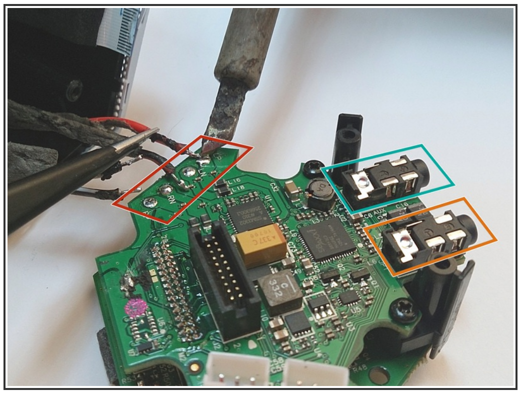
Step 11 — Separating PCB stack: Bluetooth card

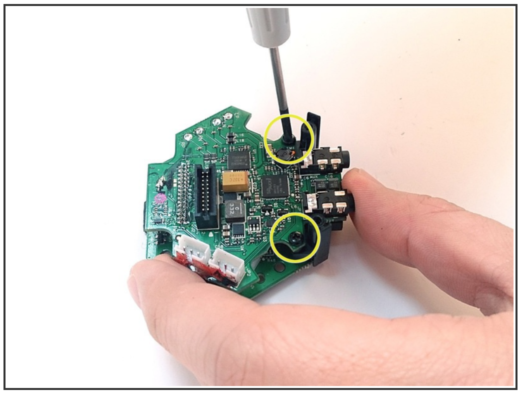


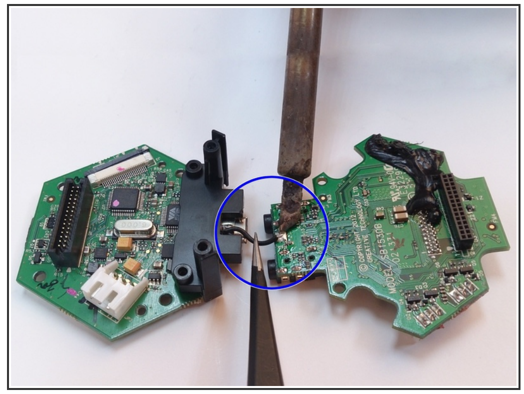


- The next PCB in the stack houses the USB port for smart device charging.
- Proceed to remove the screws on the PCB with the USB 2.0 port.
    - USB 2.0 port
- This PCB also has a Bluetooth chip processor integrated onto it.

Step 12 — Separating PCB stack: audio board



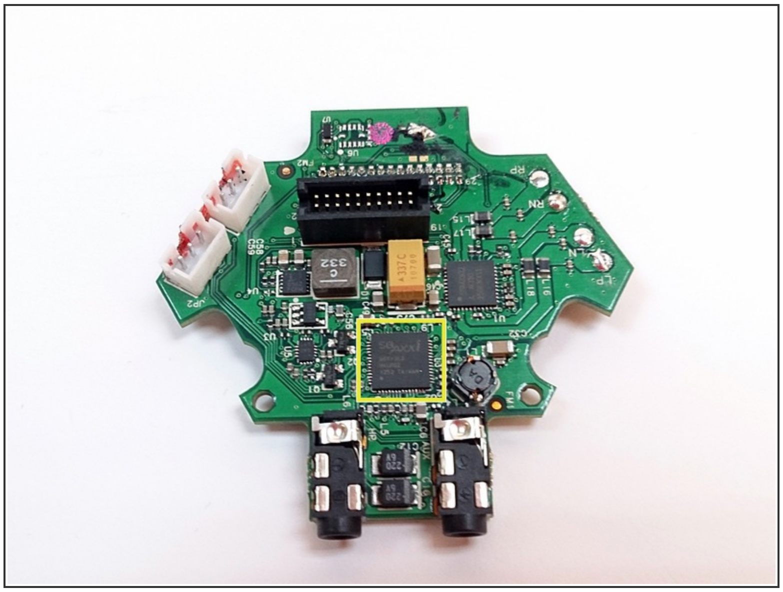


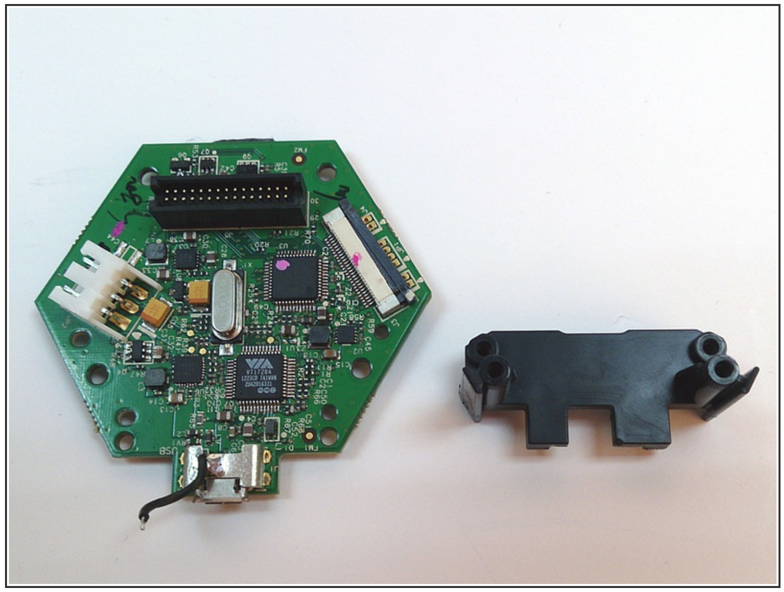


- Here's the tough part. Separating the audio board requires some soldering. It also doesn't help that I have the ugliest soldering iron on the face of the planet.
- Use a (prettier) soldering iron to melt the solders and remove the four cables connected to the audio board.
  - 3.5 mm Aux-in / Mic-in jack
  - 3.5 mm headphones jack
- Remove the two screws to detach the audio board from the bottom PCB.

  Warning: There is another cable soldered to the bottom of the audio board. Handle the audio board carefully.
- Flip the audio board carefully and you will see another cable attached to it below. Using the soldering iron, melt the solder on the audio board to detach the cable.

Step 13 — Separating PCB stack: sb-axx1 audio chip

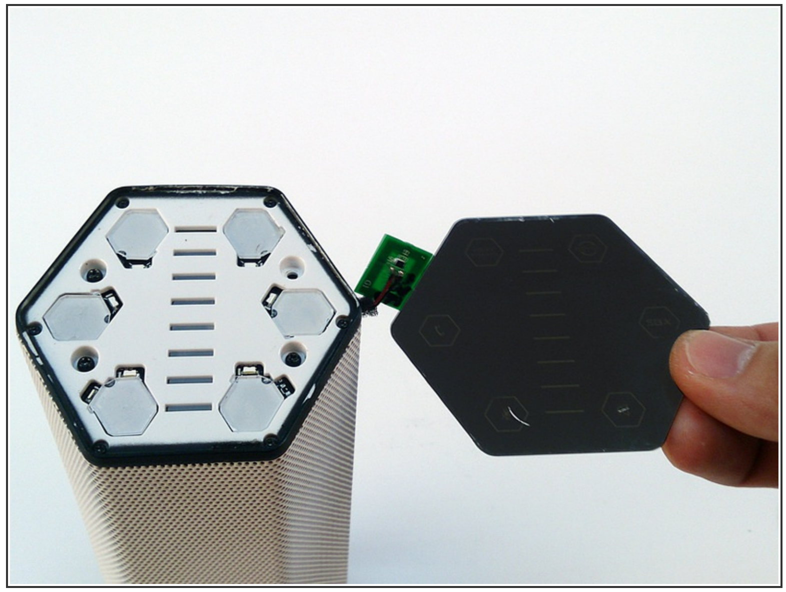




- That’s the sb-axx1 quad-core sound processor, which Sound Blaster says makes the device intelligent.

Step 14 — Removing touch panel

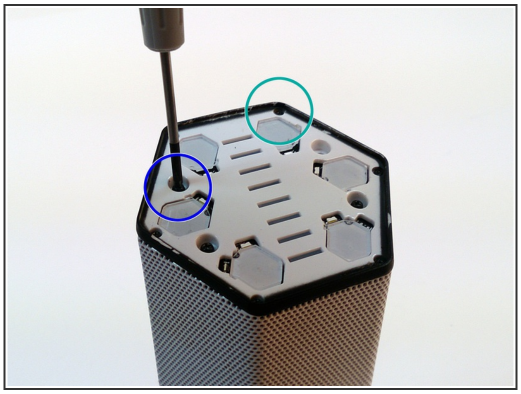
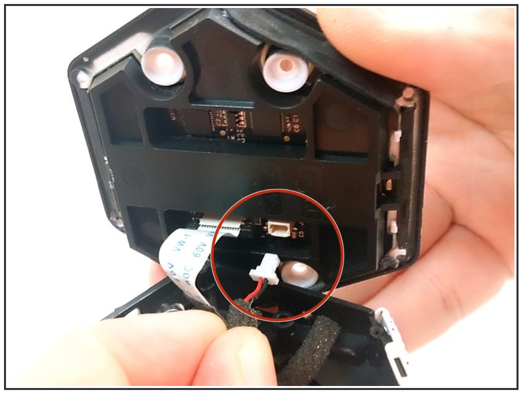
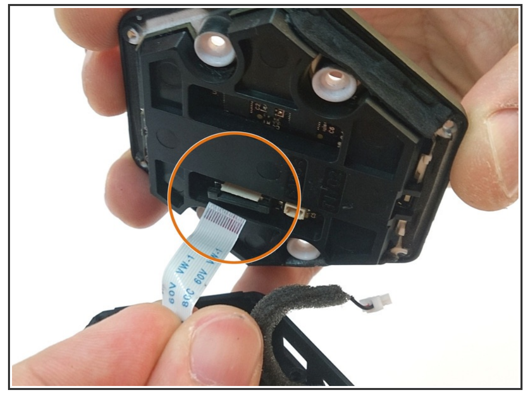




- With the bottom fully dismantled, move on to the top – the glass panel.
- A word of caution: unless God has blessed you richly with magical fingers, or you have A LOT of flux solvent and patience, chances are you'll end up cracking this thing.
- Firmly attach a small baller suction cup on the touch panel.
- Then, carefully pry open the touch panel with a hobby knife.

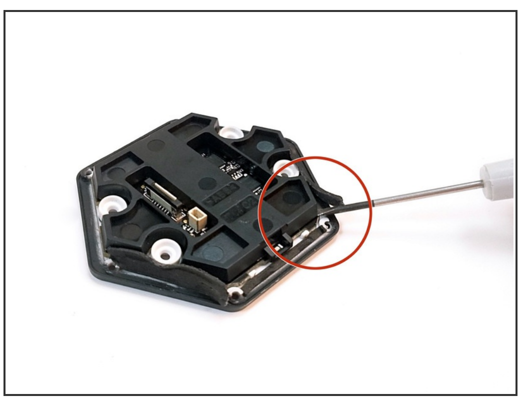
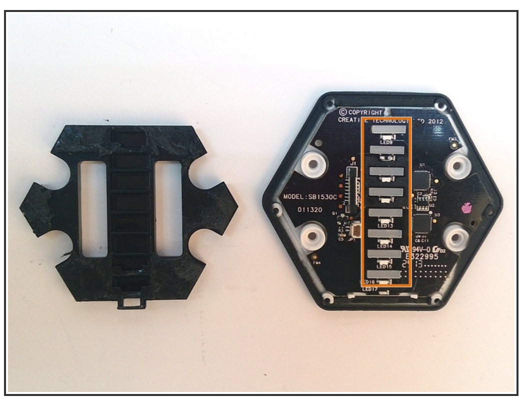
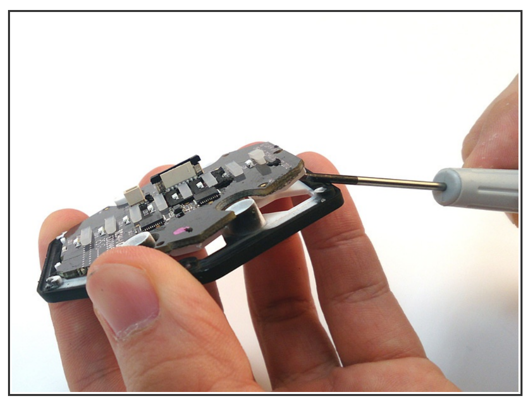
  Warning: The plastic touch panel is very tightly sealed and prone to crack. Handle the touch panel with care. Drip flux solvent in between the gaps to dissolve the adhesive.

Step 15 — Opening the top panel

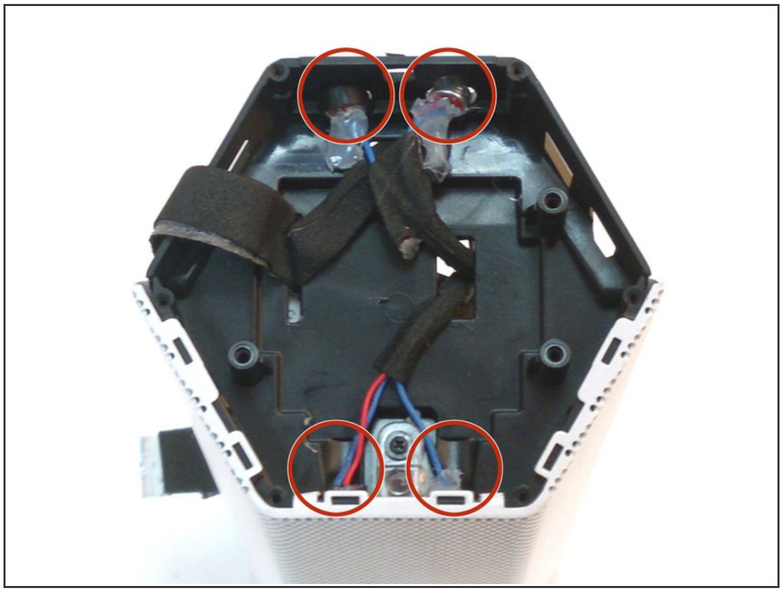
- Unscrew the six screws located at each corner of the top panel.
- Then, remove the four screws in the center to open the top panel.
  - There are cables attached to the top panel. Open the top panel with care.
- Unplug the NFC cable connected to the top panel.
- Disconnect the flex connector to completely remove the top panel.

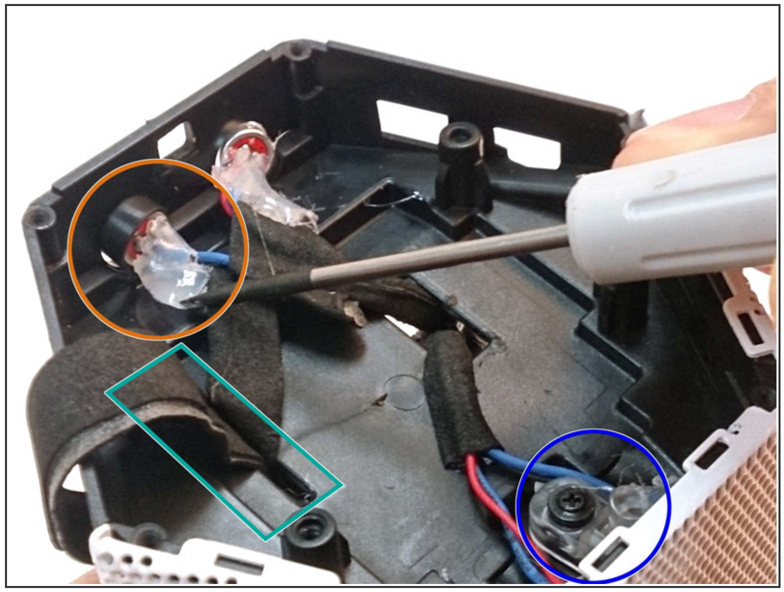
Step 16 — Touch panel PCB

- Remove the rubber strips on the side with a flat-head screwdriver.
- Lift up the plastic casing with a flat-head screwdriver.
  - The plastic casing ensures the LED lights are shielded to prevent bleeding of light.
- The LED lights on the touch panel are covered with rubber light guides.
  - Light guides allow the individual LEDs to light up one by one on the touch panel. Neat.

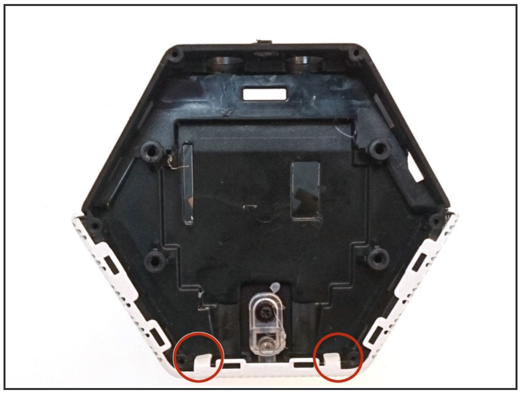
Step 17 — Microphones & connectors

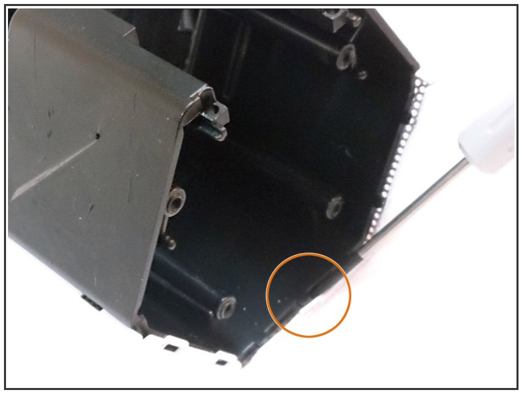


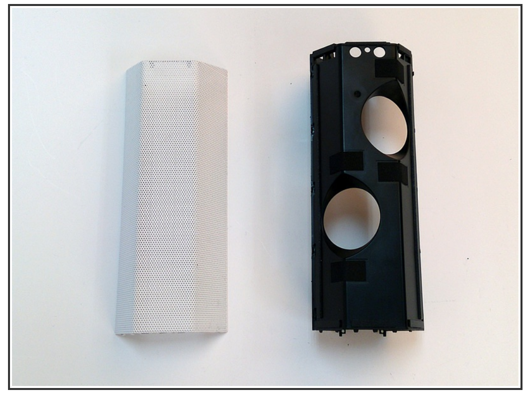


- Below the touch panel are FOUR microphones. Not one, not two… FOUR.
- Remove the adhesive (sigh) around the microphones with a flat-head screwdriver
  - Solvent may be used if the adhesive is too tough to remove.
- Next, remove the flex connector through the slot.
  - This is the main flex connector that runs from the bottom to the top panel.
- This is another light guide for the LED that acts as the AXX 200's Bluetooth indicator.
  - The actual LED is located on the touch panel PCB.

Step 18 — Removing metal grille

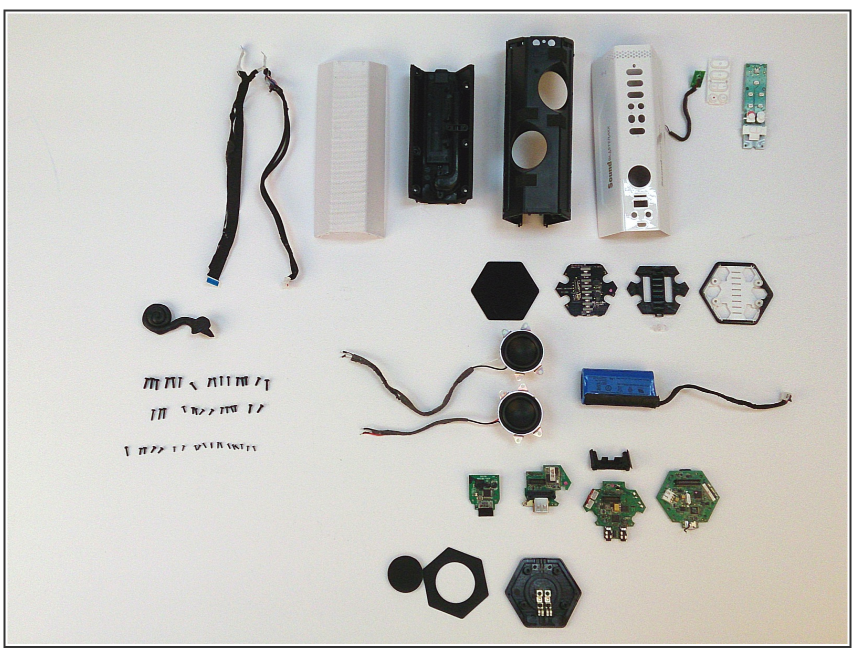






- The white metal grille at the front is also removable. If you find white a little understated, this would be the part where you break out the spray paint from the garage and go to town on this bad boy. A little unfortunate that you have to remove everything else before being able to remove the grille.
- To remove the metal grille, pry open the two catches using a flathead screwdriver.
- Lastly, slide the inner chamber out from the metal grille casing.

Step 19



- Voila! The Sound BlasterAxx AXX 200 in pieces.
- Tearing apart the AXX 200 requires patience.
- The glass touch panel breaks easily. It is highly unlikely that you can restore the AXX 200 to its original condition without some scratches or cracks.
- There are a large number of tiny screws holding together the AXX 200. It would be best to keep the screws in the order you removed them.

To reassemble your device, follow these instructions in reverse order.

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